

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	0	"The Double Diaphragm Pump" and cabuz.in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/06/18 16:35
L3	9	Double adj Diaphragm adj Pump and cabuz.in.	US-PGPUB; USPAT	OR	OFF	2011/06/18 16:35
S1	1	"10580324"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/24 16:27
S2	2	"6106245".PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/24 16:30
S3	2	"6032923".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/24 16:41
S4	2	"5367878".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/24 16:42
S5	10	("5367878"   "5705018"   "6007309"   "6032923"   "6106245").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/25 17:10
S6	69	("3381623"   "3803424"   "4115036"   "4453169"   "4498850"   "4938742"   "5078581"   "5096388"   "5176358"   "5180288"   "5192197"   "5499909"   "5725363"   "5759014"   "5759015").PN. OR ("6106245").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/25 17:17

S7	80	("2403692"   "2975307"   "3304446"   "3381623"   "3414010"   "3641373"   "3769531"   "3803424"   "3947644"   "4115036"   "4140936"   "4197737"   "4418886"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4581624"   "4651564"   "4654546"   "4722360"   "4756508"   "4821999"   "4898200"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5325880"   "5441597"   "5452878"   "5499909"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5725363"   "5759014"   "5759015"   "5822170"   "5836750"   "5863708"   "5901939"   "5911872"   "5954079"   "6106245"   "6179586"   "6182941"   "6184607"   "6192197"   "6215221"   "6240944"   "6288472").PN. OR ("6968862").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/10/25 17:24
S8	521	(micropump or micro-pump) and (cavity vacuum) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage	US-PGPUB; USPAT; USOCR	OR	ON	2008/10/25 17:38
S9	35	(micropump or micro-pump) and (cavity vacuum) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage and membrane and duct	US-PGPUB; USPAT; USOCR	OR	ON	2008/10/25 17:39

S10	81	("20020067992"   "2403692"   "2975307"   "3304446"   "3381623"   "3641373"   "3769531"   "3803424"   "3947644"   "4115036"   "4140936"   "4197737"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4651564"   "4654546"   "4756508"   "4821999"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5192197"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5441597"   "5452878"   "5499909"   "5541465"   "5542821"   "5552654"   "5571401"   "5642015"   "5683159"   "5725363"   "5759014"   "5759015"   "5836750"   "5863708"   "5901939"   "5911872"   "6106245"   "6179586"   "6184607"   "6215221"   "6450773"   "6508528"   "6520753"   "6579068").FN. OR ("6767190").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2008/10/25 18:23
S11	44	(micropump or micro-pump or mesopump or meso-pump or microvalve or micro-valve) and (cavity vacuum) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage and membrane and duct	US-PGPUB; USPAT; USOOR	OR	ON	2008/10/25 18:31
S12	810	STmicroelectronics.asn. and pump	US-PGPUB; USPAT; USOOR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/25 18:50
S13	728	STmicroelectronics.asn. and pump and voltage	US-PGPUB; USPAT; USOOR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/25 18:51

S14	164	STmicroelectronics.asn. and pump and voltage and substrate	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/10/25 18:51
S15	1725	417/53.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2008/10/25 19:51
S16	1710	257/706.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2008/10/25 19:52
S17	378	257/e21.495.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2008/10/25 19:52
S18	584	257/e23.08.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2008/10/25 19:53
S19	84	("20020067992"   "2403692" "2975307"   "3304446"   "3381623"   "3641373"   "3769531"   "3803424"   "3947644"   "4115036"   "4140936"   "4197737"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4651564"   "4654546"   "4756508"   "4821999"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5192197"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5441597"   "5452878"   "5499909"   "5541465"   "5542821"   "5552654"   "5571401"   "5642015"   "5683159"   "5725363"   "5759014"   "5759015"   "5836750"   "5863708"   "5901939"   "5911872"   "6106245"   "6179586"   "6184607"   "6215221"   "6450773"   "6508528"   "6520753"   "6579068").PN. OR ("6767190").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/20 18:11

S20	19	("20050283330"   "3264861"   "4206761"   "4377851"   "5665899"   "5693886"   "5836750"   "6106245"   "6179586"   "6184607"   "6374191"   "6432721"   "6568286"   "6644117"   "6649416"   "6729856"   "6758107"   "6767190").PN. OR ("7216048").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/20 18:12
S21	83	("2403692"   "2975307"   "3304446"   "3381623"   "3641373"   "3769531"   "3803424"   "3947644"   "4115036"   "4140936"   "4197737"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4651564"   "4654546"   "4756508"   "4786472"   "4821999"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5192197"   "5206557"   "5212993"   "5219278"   "5224843"   "5244537"   "5322258"   "5323999"   "5441597"   "5452878"   "5499909"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5725363"   "5759014"   "5759015"   "5798600"   "5836750"   "5863708"   "5901939"   "5911872"   "5961298"   "6106245"   "6179586"   "6184607"   "6184697"   "6215221"   "6382228").PN. OR ("6758107").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/20 18:27

S22	84	("20020067992"   "2403692"   "2975307"   "3304446"   "3381623"   "3641373"   "3769531"   "3803424"   "3947644"   "4115036"   "4140936"   "4197737"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4651564"   "4654546"   "4756508"   "4821999"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5192197"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5441597"   "5452878"   "5499909"   "5541465"   "5542821"   "5552654"   "5571401"   "5642015"   "5683159"   "5725363"   "5759014"   "5759015"   "5836750"   "5863708"   "5901939"   "5911872"   "6106245"   "6179586"   "6184607"   "6215221"   "6450773"   "6508528"   "6520753"   "6579068").PN. OR ("6767190").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/20 18:41
S23	80	("2403692"   "2975307"   "3304446"   "3381623"   "3414010"   "3641373"   "3769531"   "3803424"   "3947644"   "4115036"   "4140936"   "4197737"   "4418886"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4581624"   "4651564"   "4654546"   "4722360"   "4756508"   "4821999"   "4898200"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5206557"   "5219278"	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/20 19:17

		"5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5325880"   "5441597"   "5452878"   "5499909"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5725363"   "5759014"   "5759015"   "5822170"   "5836750"   "5863708"   "5901939"   "5911872"   "5954079"   "6106245"   "6179586"   "6182941"   "6184607"   "6192197"   "6215221"   "6240944"   "6288472").PN. OR ("6968862").URPN.				
S24	554	(micropump or micro-pump) and (cavity vacuum) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/21 12:23
S25	344	S24 and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/21 12:24
S26	789	((micropump or micro-pump or pump) with substrate).ab.	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/21 12:37
S27	527	S26 and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/21 12:37
S28	1	"6032923".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/05/21 12:42
S29	51	("3243181"   "3405977"   "3414331"   "3422411"   "3437335"   "3550964"   "3918706"   "4493548"   "4577854"   "4618292"   "4874273"   "5284179"   "5497987"   "5634636"   "5897097").PN. OR ("6032923").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/21 12:44
S30	1	"5367878".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/21 12:49
S31	1	"5705018".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/21 12:51
S32	1	"6007309".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/21 12:51

S33	80	("2403692"   "2975307"   "3304446"   "3381623"   "3414010"   "3641373"   "3769531"   "3803424"   "3947644"   "4115036"   "4140936"   "4197737"   "4418886"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4581624"   "4651564"   "4654546"   "4722360"   "4756508"   "4821999"   "4898200"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5325880"   "5441597"   "5452878"   "5499909"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5725363"   "5759014"   "5759015"   "5822170"   "5836750"   "5863708"   "5901939"   "5911872"   "5954079"   "6106245"   "6179586"   "6182941"   "6184607"   "6192197"   "6215221"   "6240944"   "6288472").PN. OR ("6968862").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/05/21 12:53
S34	2	"6837476".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/21 14:10



S35	91	("2403692"   "2975307"   "3304446"   "3381623"   "3414010"   "3641373"   "3769531"   "3803424"   "3947644"   "4115036"   "4140936"   "4197737"   "4418886"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4581624"   "4651564"   "4654546"   "4722360"   "4756508"   "4821999"   "4898200"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5192197"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5325880"   "5441597"   "5452878"   "5499909"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5725363"   "5759014"   "5759015"   "5822170"   "5836750"   "5863708"   "5901939"   "5911872"   "5954079"   "6106245"   "6179586"   "6182941"   "6184607"   "6215221"   "6288472").PN. OR ("6837476").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/02 18:16
S36	14	("5367878"   "5705018"   "6007309"   "6032923"   "6106245"   "6767190"   "6837476").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/02 18:40
S37	177	STmicroelectronics.asn. and pump and voltage and substrate	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/11/02 22:08
S38	75	S37 and @ad< "20021125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/02 22:08
S39	78170	(pump or valve) and membrane and @ad< "20021125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/02 22:10

S40	93534	(pump or valve) and membrane and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/02 22:11
S41	7038	S40 and substrate and (cavity opening hollow) and voltage	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/02 22:13
S42	378	S41 and (membrane and (conductive or metal) and (cavity opening)).dlm.	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/02 22:18
S43	674	257/e21.495.ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/02 23:07
S44	4	S43 and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/02 23:07
S45	85	cabuz.in. and valve	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/02 23:54
S46	225	347/112.ccls. and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/02 23:57
S47	471	137/613.ccls. and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 00:01
S48	253	["2403692"   "2975307"   "20020078756"   "20020174706"   "20030005774"   "20030019299"   "20030033884"   "20030189809"   "20030205090"   "20030234376"   "20040035211"   "20040060360"   "20040055651"   "3304446"   "3381623"   "3414010"   "3641373"   "3769531"   "3803424"   "3947644"   "3993939"   "4115036"   "4140936"   "4197737"   "4360955"   "4418886"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4581624"   "4585209"   "4619438"   "4651564"   "4654546"   "4722360"   "4756508"   "4821999"   "4829826"   "4898200"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2009/11/03 00:08

		"5180288"   "5180623"   "5186054"   "5192197"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5325880"   "5336062"   "5368571"   "5441597"   "5452878"   "5499909"   "5526172"   "5529465"   "5536963"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5696662"   "5725363"   "5759014"   "5759015"   "5792957"   "5808205"   "5810325"   "5822170"   "5836750"   "5839467"   "5863708"   "5901939"   "5911872"   "5954079"   "5971355"   "6106245"   "6109889"   "6116863"   "6122973"   "6126140"   "6151967"   "6167761"   "6179586"   "6182941"   "6184607"   "6215221"   "6240944"   "6288472"   "6373682"   "6418793"   "6445053"   "6496348"   "6508528"   "6520753"   "6590267"   "6640642"   "6651506" ).PN.				
S49	22988	(micropump or micro-pump valve) and (cavity vacuum opening hollow) and conduct \$4 and substrate and (dielectric insulat\$3) and voltage	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:30
S50	18510	(micropump or micro-pump valve) and (cavity opening hollow) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:30
S51	5448	S50 and (membrane diaphragm)	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:31
S52	5238	S51 and (fluid liquid)	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:32
S53	5115	S52 and (conductive metal)	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:33
S54	297	S53 and (membrane and (conductive or metal) and (cavity opening hollow)).clm.	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:35
S55	2495	S53 and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:35
S56	231	S54 and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:36

S57	53	S53 and (membrane with (conductive or metal) with (cavity opening hollow))	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:36
S58	28	S57 and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 00:37
S59	6395	(micropump or micro-pump valve) and (cavity opening hollow) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage and (membrane diaphragm)	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 10:05
S60	6089	S59 and (fluid liquid)	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 10:06
S61	1553	S60 and (first with second with (opening cavity hollow))	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 10:07
S62	771	S61 and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2009/11/03 10:07
S63	79	("3831623"   "3803424"   "4115036"   "4453169"   "4498850"   "4938742"   "5078581"   "5096388"   "5176358"   "5180288"   "5192197"   "5499909"   "5725363"   "5759014"   "5759015").PN. OR ("6106245").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2009/11/03 10:35
S64	124	("20020078756"   "20020174706"   "20030005774"   "20030019299"   "20030033884"   "20030189809"   "20030205090"   "20030234376"   "20040035211"   "20040055651"   "20040060360"   "2403692"   "2975307"   "3304446"   "3381623"   "3414010"   "3641373"   "3769531"   "3803424"   "3947644"   "3993939"   "4115036"   "4140936"   "4197737"   "4360955"   "4418886"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4581624"   "4585209"   "4619438"   "4651564"   "4654546"   "4722360"   "4756508"   "4821999"   "4829826"   "4898200"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"	US-PGPUB; USPAT; USOOR	OR	OFF	2009/11/03 10:39

		"5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5186054"   "5192197"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5325880"   "5336062"   "5368571"   "5441597"   "5452878"   "5499909"   "5526172"   "5529465"   "5536963"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5696662"   "5725363"   "5759014"   "5759015"   "5792957"   "5808205"   "5810325"   "5822170"   "5836750"   "5839467"   "5863708"   "5901939"   "5911872"   "5954079"   "5971355"   "6106245"   "6109889"   "6116863"   "6122973"   "6126140"   "6151967"   "6167761"   "6179586"   "6182941"   "6184607"   "6215221"   "6240944"   "6288472"   "6373682"   "6418793"   "6445053"   "6496348"   "6508528"   "6520753"   "6590267"   "6640642"   "6651506").PN. OR ("7222639").URPN.				
S65	32	("3993939"   "4225755"   "4360955"   "4584885"   "4829826"   "4996627"   "5019783"   "5048165"   "5801313").PN. OR ("6151967").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2009/11/03 10:51
S66	124	("20020078756"   "20020174706"   "20030005774"   "20030019299"   "20030033884"   "20030189809"   "20030205090"   "20030234376"   "20040035211"   "20040055651"   "20040060360"   "2403692"   "2975307"   "3304446"   "3381623"   "3414010"   "3641373"   "3769531"   "3803424"   "3947644"   "3993939"   "4115036"	US-PGPUB; USPAT; USOOR	OR	OFF	2009/11/03 10:53

		"4140936"   "4197737"   "4360955"   "4418886"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4581624"   "4585209"   "4619438"   "4651564"   "4654546"   "4722360"   "4756508"   "4821999"   "4829826"   "4898200"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5186054"   "5192197"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5325880"   "5336062"   "5368571"   "5441597"   "5452878"   "5499909"   "5526172"   "5529465"   "5536963"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5696662"   "5725363"   "5759014"   "5759015"   "5792957"   "5808205"   "5810325"   "5822170"   "5836750"   "5839467"   "5863708"   "5901939"   "5911872"   "5954079"   "5971355"   "6106245"   "6109889"   "6116863"   "6122973"   "6126140"   "6151967"   "6167761"   "6179586"   "6182941"   "6184607"   "6215221"   "6240944"   "6288472"   "6373682"   "6418793"   "6445053"   "6496348"   "6508528"   "6520753"   "6590267"   "6640642"   "6651506").PN. OR ("7222639").URPN.				
S67	42	("4895500"   "4911616"   "4923000"   "4938742").PN. OR ("5078581").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/03 11:04
S68	8	("3947156"   "4634430"   "5145336"   "5669764"   "6019135"   "6098991"   "6106245").PN. OR ("6971859").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/03 11:29

S69	6395	(micropump or micro-pump valve mesopump meso \$1pump) and (cavity opening hollow) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage and (membrane diaphragm)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 12:18
S70	264	S69 and ((inlet outlet) near4 (smaller bigger larger))	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 12:35
S71	75	S70 and @ad<"20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 12:35
S72	1	"6032923".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 12:42
S73	13	"0779436"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 12:44
S74	1	"5367878".pn.	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 12:44
S75	38	("3524031"   "4821997"   "4824073"   "4943032"   "4965415"   "4966646"   "5164558"   "5177579"   "5186001").PN. OR ("5367878").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/03 12:46
S76	45	("3168805"   "3256686"   "3739573"   "3802462"   "4170878"   "4543788"   "5197192"   "5210817"   "5268082"   "5322258"   "5325880"   "5344117"   "5367878").PN. OR ("5671905").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/03 12:52
S77	10	("0668682"   "2548708"   "3905195"   "4149383").PN. OR ("4543788").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/03 12:56
S78	91	("2403692"   "2975307"   "3304446"   "3381623"   "3414010"   "3641373"   "3769531"   "3803424"   "3947644"   "4115036"   "4140936"   "4197737"   "4418886"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4581624"   "4651564"   "4654546"   "4722360"   "4756508"   "4821999"   "4898200"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/03 14:38

		"5192197"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5325880"   "5441597"   "5452878"   "5499909"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5725363"   "5759014"   "5759015"   "5822170"   "5836750"   "5863708"   "5901939"   "5911872"   "5954079"   "6106245"   "6179586"   "6182941"   "6184607"   "6215221"   "6288472"  .FN. OR ("6837476").URPN.				
S79	140	("20020078756"   "20020174706"   "20020192113"   "20030005774"   "20030019299"   "20030033884"   "20030142291"   "20030189809"   "20030205090"   "20030234376"   "20040035211"   "20040060360"   "2403692"   "2975307"   "3304446"   "3381623"   "3414010"   "3641373"   "3769531"   "3803424"   "3947644"   "3993939"   "4115036"   "4140936"   "4197737"   "4360955"   "4418886"   "4453169"   "4478076"   "4478077"   "4498850"   "4501144"   "4539575"   "4576050"   "4581624"   "4585209"   "4619438"   "4651564"   "4654546"   "4722360"   "4756508"   "4821999"   "4829826"   "4898200"   "4911616"   "4938742"   "4939405"   "5065978"   "5069419"   "5078581"   "5082242"   "5085562"   "5096388"   "5129794"   "5148074"   "5171132"   "5176358"   "5180288"   "5180623"   "5186054"   "5192197"   "5206557"   "5219278"   "5224843"   "5244527"   "5244537"   "5322258"   "5323999"   "5325880"   "5336062"   "5368571"	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/03 14:39



		"5417235"   "5441597"   "5452878"   "5499909"   "5526172"   "5529465"   "5536963"   "5541465"   "5552654"   "5571401"   "5642015"   "5683159"   "5696662"   "5725363"   "5759014"   "5759015"   "5792957"   "5808205"   "5822170"   "5836750"   "5839467"   "5863708"   "5901939"   "5911872"   "5954079"   "5971355"   "6106245"   "6109889"   "6116863"   "6122973"   "6151967"   "6167761"   "6179586"   "6182941"   "6184607"   "6184608"   "6211580"   "6215221"   "6240944"   "6255758"   "6288472"   "6358021"   "6373682"   "6382228"   "6382588"   "6418793"   "6432721"   "6445053"   "6496348"   "6508528").PN. OR ("6520753"   "6549275"   "6568286"   "6590267"   "6597438"   "6640642"   "6644117"   "6649416"   "6651506"   "6729856"   "6750589"   "6758107"   "6767190"   "6837476").PN. OR ("7445017").URPN.				
S80	32	("3993939"   "4225755"   "4360955"   "4584885"   "4829826"   "4996627"   "5019783"   "5048165"   "5801313").PN. OR ("6151967").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2009/11/03 14:49
S81	6395	(micropump or micro-pump valve mesopump meso \$1pump) and (cavity opening hollow) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage and (membrane diaphragm)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 14:57
S82	871	S81 and ((opening) near4 (smaller bigger larger))	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 14:57
S83	15	S81 and (((opening) near4 (smaller bigger larger)) with first with second)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 15:00
S84	0	S81 and (((vent) near4 (smaller bigger larger)) with first with second)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 15:03

S85	0	S81 and (((duct) near4 (smaller bigger larger)) with first with second)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 15:03
S86	1025	S81 and ((opening) with (smaller bigger larger))	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 15:35
S87	44	S81 and (((opening) with (smaller bigger larger)) with first with second)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 15:36
S88	8	S81 and (((opening) with (smaller bigger larger)) with first with second).dm.	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 15:41
S89	573	S81 and ((opening duct) same (smaller bigger larger) same (fluid liquid) same flow)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 16:49
S90	26	S81 and ((opening duct) with (smaller bigger larger) with (fluid liquid) with flow)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 16:50
S91	19	S81 and ((inlet outlet) with (smaller bigger larger) with (fluid liquid) with flow)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 16:54
S92	9	S81 and ((inlet outlet) with (different) with (size) with flow)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 16:57
S93	2	S81 and ((opening duct) with (different) with (size) with flow)	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 17:00
S94	83	S81 and ((opening duct) with (different) with (size))	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 17:01
S95	0	251/129/01.ccls. and @ad<"20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 17:05
S96	429	251/129.01.ccls. and @ad<"20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 17:06
S97	177	STmicroelectronics.asn. and pump and voltage and substrate	US-PGPUB; USPAT; USOCR; FRRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/11/03 20:28
S98	108	S97 and @ad<"20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2009/11/03 20:28
S99	58	((GUILLAUME) near2 (BOUCHE)).INV.	US-PGPUB; USPAT	OR	OFF	2010/06/16 17:13
S100	475	stmicroelectronics.asn. and pump and transistor	US-PGPUB; USPAT; USOCR; FRRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 17:23

SI01	0	stmicroelectronics.asn. and (pump same transistor same cavity same membrane)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 17:25
SI02	3	stmicroelectronics.asn. and (pump and transistor and cavity and membrane)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 17:26
SI03	611	stmicroelectronics.asn. and (pump and transistor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/06/16 17:27
SI04	8	stmicroelectronics.asn. and (pump and transistor and cavity)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/06/16 17:28
SI05	5	stmicroelectronics.asn. and (pump and transistor and membrane)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/06/16 17:29
SI06	3	(pump same transistor same cavity same membrane)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 17:30
SI07	8374	(pump with transistor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 17:36
SI08	638	(micropump or micro-pump) and (cavity vacuum) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 17:37
SI09	128	SI08 and transistor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 17:37

Si10	25099	(pump micropump or micro-pump) and (cavity vacuum) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 17:37
Si11	5426	Si10 and transistor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 17:38
Si12	19802	(micropump or micro-pump valve) and (cavity opening hollow) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 17:40
Si13	5889	Si12 and (membrane diaphragm)	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 17:40
Si14	5670	Si13 and (fluid liquid)	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 17:40
Si15	5543	Si14 and (conductive metal)	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 17:40
Si16	737	Si15 and transistor and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 17:40
Si17	3	stmicroelectronics.asn. and ((pump micropump micro-pump "micro pump") and transistor and cavity and membrane)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/16 17:43
Si18	97	Si109 and @ad< "20070518"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 17:45
Si19	55	257/706.cds. and pump and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 18:28
Si20	150	(pump and transistor and substrate).ab. and @ad< "20070518"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 18:58
Si21	27	Si20 not (charge adj pump)	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/16 18:58
Si22	7	("5367878"   "5705018"   "6007309"   "6032923"   "6106245"   "6767190"   "6837476").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/17 06:43
Si23	121	("4794370"   "5380396"   "5585011").PN. OR ("5705018").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/17 06:47
Si24	638	(micropump or micro-pump) and (cavity vacuum) and conduct\$4 and substrate and (dielectric insulat\$3) and voltage	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/17 06:52

Si25	347	Si24 and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 06:52
Si26	87	Si25 and transistor	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 07:06
Si27	1	"6629425".pn.	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 07:20
Si28	26	("4450472"   "4745760"   "4800422"   "4938742"   "4950181"   "5179043"   "5218515"   "5241450"   "5278103"   "5461003"   "5619177"   "5668398"   "5876187"   "5901037"   "5936295"   "6228744").PN. OR ("6629425").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/17 07:24
Si29	2	09/912623	US-PGPUB; USPAT; USOOR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/17 13:38
Si30	9	09/912631	US-PGPUB; USPAT; USOOR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/17 13:38
Si31	55	(pump\$3 with semiconductor near substrate with transistor) and @ad< "20021125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 17:13
Si32	61	(pump\$3 with semiconductor near substrate with transistor) and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 17:14
Si33	0	((pump\$3 with semiconductor near substrate with transistor) same cool\$3) and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 17:15
Si34	0	((pump\$3 with semiconductor near substrate with transistor) same (cool\$3 heat adj dissipat\$4)) and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 17:16
Si35	2	((pump\$3 with substrate with transistor) same (cool\$3 heat adj dissipat\$4)) and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 17:16
Si36	116	("5218515").PN. OR ("5901037").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/17 17:19

SI37	1	((pump\$3 same (semiconductor adj substrate) same transistor) same (cool \$3 (heat adj dissipat\$4) (heat adj extract\$4))) and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 17:24
SI38	25	("20020039280"   "4450472"   "4745760"   "4800422"   "4938742"   "4950181"   "5001548"   "5016138"   "5179043"   "5218515"   "5241450"   "5278103"   "5461003"   "5619177"   "5668398"   "5763951"   "5876187"   "5901037"   "5901556"   "5916247"   "5936295"   "6228744"   "6272866").PN. OR ("7107777").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/17 17:38
SI39	116	("5218515").PN. OR ("5901037").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/17 17:46
SI40	465	(pump\$3 with semiconductor near substrate) and @ad< "20021125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 17:52
SI41	317	SI40 not (charge adj pump)	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 17:52
SI42	106	SI41 and (cool\$3 (heat adj dissipat\$4) (heat adj extract \$4)) and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 17:54
SI43	7	("5367878"   "5705018"   "6007309"   "6032923"   "6106245"   "6767190"   "6837476").PN.	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/17 18:20
SI44	17	(micropump or micro-pump "micro pump") with semiconductor adj substrate	US-PGPUB; USPAT	OR	ON	2010/06/19 14:02
SI45	5	("5403783"   "5532906"   "6528878"   "6607928").PN. OR ("7170164").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/19 14:26
SI46	3	("6528878"   "6607928"   "7170164").PN. OR ("7528483").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/19 14:28
SI47	1921	257/706.ccls.	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/19 14:53
SI48	1208	SI47 and @ad< "20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/19 14:53
SI49	173	SI48 and ((semiconductor adj substrate) or (substrate near silicon))	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/19 14:54

S150	351	((micropump or micro-pump) and (cavity vacuum) and conduct\$4 and ((semiconductor or silicon) adj substrate) and (dielectric insulat\$3) and voltage	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/19 15:10
S151	340	S150 and (@ad< "20070518" or @riad< "20070518")	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/19 15:34
S152	183	S151 and ((fluid or liquid) same (cool\$3 heat))	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/19 15:35
S153	23	((micropump or micro-pump) same ((semiconductor or silicon) adj substrate) same ((fluid or liquid) same (cool\$3 heat))	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/19 15:38
S154	7	("5095349"   "5236547"   "5362213"   "5989974"   "6069392"   "6287885"   "6386507").PN. OR ("7701022").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/19 15:47
S155	7	((micropump or micro-pump) same ((semiconductor or silicon) adj substrate) same ((fluid or liquid) same (inlet and outlet))	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/19 16:00
S156	90	("4581624"   "4770740"   "4966646").PN. OR ("5244537").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/19 16:08
S157	34	("20020131230"   "20030231967"   "20040023236"   "20040075073"   "20040108479"   "20040113980"   "20050139797"   "4581624"   "5244537"   "5380396"   "5529465"   "5588466"   "5901939"   "6000676"   "6089534"   "6131879"   "6142444"   "6168395"   "6182941"   "6237619"   "6240962"   "6382588"   "6406605"   "6453928"   "6561224"   "6579068"   "6597560"   "6644944"   "6802342"   "6830071"   "6953058"   "7001013"   "7159618"   "7195393").PN. OR ("7607455").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/19 16:18
S158	81	((valve) same ((semiconductor or silicon) adj substrate) same ((fluid or liquid) same (inlet and outlet))	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/19 16:26

S159	59	S158 and (@ad<"20070518" or @rlad<"20070518")	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/19 16:48
S160	1	S159 and transistor	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/19 16:49
S161	70	("4585209"   "4628576"   "4647013").PN. OR ("4826131").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/19 16:51
S162	77	valve same ((semiconductor or silicon) adj substrate) same (fluid or liquid) same transistor	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/19 17:23
S163	57	S162 and (@ad<"20070518" or @rlad<"20070518")	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/19 17:23
S164	7	("5367878"   "5705018"   "6007309"   "6032923"   "6106245"   "6767190"   "6837476").PN.	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/19 17:29
S165	57	("3243181"   "3405977"   "3414331"   "3422411"   "3437335"   "3550964"   "3918706"   "4493548"   "4577854"   "4618292"   "4874273"   "5284179"   "5497987"   "5634636"   "5897097").PN. OR ("6032923").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/19 17:32
S166	58	((GUILLAUME) near2 (BOUCHE)).INV.	US-PGPUB; USPAT	OR	OFF	2010/06/19 17:38
S167	4	("5776381"   "6392233"   "6499217"   "7082024").PN. OR ("7565725").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/19 17:42
S168	10	("3993939"   "4369483"   "4944187"   "5559665"   "5884378"   "6046659"   "6738484").PN. OR ("7082024").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/19 17:42
S169	116	("5218515").PN. OR ("5901037").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/19 17:47
S170	7	(diaphragm with (semiconductor adj substrate) with transistor) and @ad<"20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/22 12:59
S171	0	((semiconductor adj substrate) with transistor with duct) and @ad<"20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/22 13:38
S172	8	((semiconductor adj substrate) same pump same duct) and @ad<"20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/22 13:38
S173	6	((semiconductor adj substrate) near5 duct) and @ad<"20031125"	US-PGPUB; USPAT; USOOR	OR	ON	2010/06/22 13:42



Si174	0	((semiconductor adj substrate) same duct same micropump) and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/22 13:54
Si175	17	((semiconductor adj substrate) with duct) and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/22 13:55
Si176	5	10/661299	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2010/06/23 13:53
Si177	1454	438/672.ccls. and (@ad< "20070518" or @riad< "20070518")	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/23 13:56
Si178	696	Si177 and transistor	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/23 13:56
Si179	57	Si177 and transistor and (inlet outlet conduit tube canal pipe)	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/23 13:57
Si180	180	257/712.ccls. and transistor and (inlet outlet conduit tube canal pipe)	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/23 15:43
Si181	5	("5403783"   "5532906"   "6528878"   "6607928").FN. OR ("7170164").URFN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/23 16:39
Si182	67	("4450472"   "4758926"   "4894709"   "5051814"   "5218515"   "5293070"   "5453641").FN. OR ("5801442").URFN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/23 17:11
Si183	7	("5218515"   "5664864"   "5801442"   "6678168").FN. OR ("6780678").URFN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/23 17:17
Si184	67	("4450472"   "4758926"   "4894709"   "5051814"   "5218515"   "5293070"   "5453641").FN. OR ("5801442").URFN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/23 18:04
Si185	2	09/895136	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/23 18:18
Si186	14	("5099311"   "5801442"   "5989445").FN. OR ("6521516").URFN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/23 18:19
Si187	14	("5099311"   "5801442"   "5989445").FN. OR ("6521516").URFN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/23 18:22

SI88	108	("4361717"   "4450472"   "4567505"   "4573067"   "4758926"   "4893590"   "4894709").PN. OR ("5099311").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/23 18:32
SI89	14	("20010040022"   "20040104468"   "4580149"   "4872028"   "4894709"   "4921041"   "5099311"   "5219020"   "5400061"   "6148635"   "6200536"   "6564861"   "6672373").PN. OR ("7261144").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/23 18:33
SI90	115	(substrate with microchannel with cool\$3) and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/24 12:04
SI91	31	("3579142"   "3631362"   "4029400"   "4657358"   "4837771"   "4849036"   "4944580"   "5335237"   "5441803"   "5553088"   "5563899"   "5579333"   "5610751"   "5661738"   "5699372"   "5703893"   "5796761"   "5832015"   "5846638"   "5856996"   "5872803"   "5872804"   "5875206"   "5903583"   "5936984").PN. OR ("6810060").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/24 13:52
SI92	116	("5218515").PN. OR ("5901037").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/24 14:33
SI93	116	("5218515").PN. OR ("5901037").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2010/06/24 16:20
SI94	269	(valve same ((semiconductor or silicon) adj substrate) same ((fluid or liquid) or cool \$3)) and transistor	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/24 16:32
SI95	149	SI94 and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/24 16:32
SI96	191	(micropump or micro-pump) and (cavity vacuum) and transistor and ((semiconductor or silicon) adj substrate)	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/24 17:39
SI97	99	SI96 and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/24 17:39
SI98	90	(micropump or micro-pump) and (cool\$3) and (fluid or liquid) and transistor and ((semiconductor or silicon) adj substrate) and @ad< "20031125"	US-PGPUB; USPAT; USOCR	OR	ON	2010/06/24 17:42

S199	21	("2039999"   "4392362"   "4951740"   "5099311"   "5176358"   "5412535"   "5435152"   "5441597"   "5457956"   "5542821"   "5943877"   "5966957"   "6033191"   "6085831"   "6106245"   "6148635"   "6164081"   "6215221"   "6741469").FN. OR ("6883337").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/24 18:34
S200	39	("5271724"   "5542821"   "5836750").FN. OR ("6033191").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/24 18:37
S201	6	("20020170875"   "4532700"   "5405786"   "5834333").FN. OR ("6803637").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2010/06/24 18:40
S202	4	((liquid adj cool adj (chip core cpu)) and (@ad< "20031125" or @rlad< "20031125"))	US-PGPUB; USPAT; USOOR	OR	ON	2011/06/17 11:16
S203	6	((liquid near cool near (chip core cpu)) and (@ad< "20031125" or @rlad< "20031125"))	US-PGPUB; USPAT; USOOR	OR	ON	2011/06/17 11:18
S204	481	((liquid with cool with (chip core cpu)) and (@ad< "20031125" or @rlad< "20031125"))	US-PGPUB; USPAT; USOOR	OR	ON	2011/06/17 11:20
S205	86	S204 and substrate	US-PGPUB; USPAT; USOOR	OR	ON	2011/06/17 11:20
S206	20	("5735340"   "5777847"   "5851337"   "5909057"   "6002171"   "6015722"   "6081037"   "6114761"   "6157086"   "6281573").FN. OR ("6794223").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2011/06/17 11:29
S207	8	((liquid with cool with (chip core cpu) with substrate) and (@ad< "20031125" or @rlad< "20031125"))	US-PGPUB; USPAT; USOOR	OR	ON	2011/06/17 11:33
S208	59	("4545112"   "4585209"   "4821999"   "4827323"   "5006487"   "5036383"   "5060050").FN. OR ("5180623").URPN.	US-PGPUB; USPAT; USOOR	OR	OFF	2011/06/17 11:40
S209	2	10/169464	US-PGPUB; USPAT; USOOR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/06/17 12:05

S210	9	("20020170875"   "4532700"   "5405786"   "5834333").PN. OR ("6803637").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/06/17 12:05
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